

Case Study

California Stationary Fuel Cell Collaborative



MAIN ISSUE OR CHALLENGE

To facilitate commercialization and deployment of fuel cells into California's energy infrastructure

COMPANY GOALS/OBJECTIVES

The purpose of the Collaborative is to take a leadership role in facilitating the advancement, demonstration, and use of fuel cells for power generation in stationary applications throughout California. It is the intention of the Collaborative to implement an inter-organizational policy to utilize fuel cells in government facilities; identify and address regulatory barriers, engage in fuel cell education and outreach activities to promote stationary fuel cell systems and collect, evaluate and distribute data on the potential for commercialization of fuel cells for power generation in California.

RELEVANT FACTS

Cost reduction is the principal barrier and the primary focus of the Collaborative. All indications from industry are that average costs can be reduced over time to competitive levels with this stationary applications initiative. For other factors, like efficiency and emissions, fuel cells are the most attractive technology to transition towards a "hydrogen" economy. The success of cost reduction in other technologies (hybrid cars, wind power, wireless communication etc.) offers a proven basis to pursue this initiative aggressively. The Collaborative has developed a Strategic Plan that identifies the steps it should take over the next few years to accomplish its mission and goals. Further, the Collaborative can play a leadership role in the implementation process.

MAJOR PARTNERS

Members of the Collaborative represent more than 20 organizations interested in combining efforts and resources towards commercialization of stationary fuel cells in California. The members include California organizations such as the Air Resources Board, the California Energy Commission, the Department of General Services, the South Coast Air Quality Management District and the National Fuel Cell Research Center at the University of California, Irvine. These and other organizations including the federal Department of Energy and Department of Defense form the Core Group, which is now implementing a program of activities towards its mission. In addition to the Core Group, working

groups of key stakeholders have organized to address specific issues for commercialization including the identification of end users, the development of demonstration projects, the development of criteria and procedures to support bulk procurements, the establishment of policy, administration and financing requirements and public outreach.

BENEFITS

Fuel cells are one of the preferred technologies for power generation because, like some other distributed generation technologies, there can be substantial benefits including, reducing or eliminating air pollutants and greenhouse gas emissions, increasing energy efficiency, promoting energy reliability and security, promoting energy diversity, and realizing a sustainable energy future. The efforts of the Collaborative will lead to cross-linkages of the Collaborative's activity with other fuel cell and renewable technology initiatives such as the California Fuel Cell Partnership, which is focused on the transportation sector. To place the benefits of fuel cells in perspective, we need to look at the positive impacts such as health costs vs. technology, lifetime benefits, and other technological benefits mentioned above. The combined effort of these initiatives will be the foundation from which future regulations and policies can be framed so as to accelerate the benefits to California.

CONCLUSIONS

Fuel cell technology has been slow to advance in the marketplace, as high prices, skepticism, and resistance by parochial interests have dissuaded markets. It is certain that world wide, energy demand will increase substantially. The question will be how this demand will be met. The tendencies towards lower costs, end-user choices, reliability, security, more dispersed generation, and a greater mix of renewable energy is driving the rapid developments in information and alternative technologies. We are seeing investment in stationary and small portable power marketplace as these technologies continue to advance. Some technology forecasters believe that stationary fuel cells provide the potential as the most significant enabling technology to make the transition to a "hydrogen economy" as the preferred option for renewable energy supplies. The above considerations provide the basis for CASFCC's mission.